

# Proceedings of the United States National Museum



SMITHSONIAN INSTITUTION • WASHINGTON, D.C.

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Volume 124

1967

Number 3632

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## Two New Species of *Cartwrightia* from Central and South America (Coleoptera: Scarabaeidae: Aphodiinae)

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By Oscar L. Cartwright  
*Curator, Division of Coleoptera*

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The genus *Cartwrightia*, described by Federico Islas S. in 1958 for a single Mexican species, superficially appears most closely allied to *Rhyparus* in the tribe Rhyparina but actually will fall in the tribe Eupariina as now defined. The species are myrmecophilous as are those of *Euparia*, *Euparixia*, *Myrmecaphodius*, and some others of the Eupariina. One of the two new species described below was collected in a detritus cavity six to eight feet deep in the nest of a leaf-cutting ant, *Atta cephalotes* (L.). *Euparixia* have been taken as deep as 12 feet below the surface in *Atta* nests.

The species of *Cartwrightia* (so beautifully shown in the plates by Mrs. Elsie Froeschner, our staff artist) have a very distinctive habitus not duplicated in any other genus. The depressions of the pronotum and the two large bulbous formations at the apices of the elytra are unique.

The first Mexican species is redescribed for the benefit of non-Spanish readers and because a few additional characters may help in its determination. The original description was in Spanish.

## Key to Species

1. Pronotal ridges widely bare, shining and noticeably punctate (see pl. 1);  
Mexico, El Salvador, Guatemala . . . . . *C. islasi*, new species  
Pronotal ridges not widely bare, shining or noticeably punctate . . . . . 2
2. Anterior longitudinal pronotal ridges narrow, sharply carinate; Bolivia.  
*C. cartwrighti*, new species  
All pronotal ridges low, rounded; Mexico . . . . . *C. intertribalis* Islas

*Cartwrightia islasi*, new species

## PLATE 1

HOLOTYPE MALE.—Length 3.45 mm, width 1.5 mm. Elongate, subparallel, generally dark reddish brown with areas of grayish golden-brown argillaceous coating showing on head, pronotum, tips of elytra and underside. Clypeus with double anterior edge, upper and lower margins separated by fine narrow furrow extending from gena to gena, lower margin with median triangular tooth directed downward; upper margin very narrowly recurved, moderately deeply emarginate between low triangular teeth, laterally nearly straight to genal suture; gena arcuate downward with sharp posterior angle; clypeal-frontal suture distinct from gena to base; discal area convex, slightly concave each side, surface shining brown, minutely alutaceous, without argillaceous coating, punctures shallow, fine to moderate, separated by about their diameter, group of slightly coarser punctures on each side near frontal suture; posterior margin of clypeus elevated above frontal-basal area and downward on each side to gena; fine carina-like margin following curvature of eye with furrow in front of it; basal area behind clypeus dull, minutely alutaceous.

Pronotum wider in front, anterior edge narrowly membranous, surface generally shining, dark brown, with five depressed areas and posterior margin showing argillaceous coating, five areas separated and surrounded by low rounded ridges; two large anterior areas separated by longitudinal median ridge, replaced suddenly by narrow median depressed area of equal width over posterior half to base; two sinuate lateral depressed areas extending diagonally backward from anterior angles to middle of median basal area (pl. 1); median basal area with deep, sharply incised median line and diagonal areas with similar sinuate incised line; deep line also visible from side along posterior angle. Shiny ridges quite closely finely punctate, slightly finer and closer along anterior pronotal margin; two anterior depressions with row of close coarse punctures in front and group of very close, coarse punctures posteriorly. Base of pronotum very weakly angulate at middle.

Scutellum elongate, parallel, three times as long as wide. Elytra length 2.3 mm, width 1.5 mm. Humeri distinctly dentate. Each

elytron with sutural, four discal, and marginal costa separated by wide shiny intervals; costae, without argillaceous coating in holotype, high, cariniform, about half as wide as discal intervals, which have lateral rows of punctures except over apical declivity, where they disappear. First discal costa widened apically into large argillaceous bulbous end as wide as first two intervals and first two discal costae combined; large bulbous end narrowly separated from sutural costa and from second and third discal costae with slightly enlarged argillaceous ends. Sutural costae not appreciably widened at apex.

Prosternum with large, wide, triangular posterior intercoxal process. Mesosternum flattened, slightly concave, sides flaring and partly covering anterior three-fifths of middle coxae; meso-metasternal suture as wide as length of middle trochanter. Metasternum with long, deeply incised midline in slightly concave discal area, minutely alutaceous, finely punctate, a slightly roughened triangular depression in front of hind coxa, otherwise very finely alutaceous outward to sides.

Five visible abdominal segments, narrower at middle than at sides, terminal segment about three times as long as penultimate, all except terminal narrowly edged posteriorly with argillaceous coating, anteriorly indistinctly crenate, surface otherwise finely alutaceous and with scattered very fine punctures, terminal with fine shallow punctures generally separated by one diameter or less. Pygidium with scabrous-argillaceous coating and low median, longitudinal carina.

Anterior femora with perimarginal groove, six or seven long setae along outer margin and row of shorter setae along posterior margin, surface finely alutaceous with evenly distributed, shallow, moderate, setigerous punctures separated by two or three diameters, setae short, semi-appressed about as long as diameter of punctures; tibia with three teeth, two terminal one on inside, one outside, and one lateral at apical fourth; apical spur slender, acuminate, slightly hooked. Middle and posterior femora slender, shining, setigerously punctate as forefemora, complete posterior marginal line; tibia slender, parallel sided, tarsi longer than tibia, long spur half as long as first tarsal segment, latter subequal in length to remaining four segments combined; claws very fine.

ALLOTYPE FEMALE.—Length 4 mm, width 1.6 mm. Head outlined with fine cream-colored argillaceous line close to finely reflexed anterior margin of clypeus, curving up around eyes and across base; large similarly colored comma-shaped argillaceous area curving down around each side of median convexity, small median frontal spot behind elevated posterior margin of clypeus. Elytral costae with very fine line of argillaceous coating on each side of sharp shining top.

Spur of anterior tibiae heavier and straight. Femora less shining than in male, covered with thin argillaceous coating. Terminal and penultimate abdominal segments of equal length, with cream-colored argillaceous coating covering half their length along their common margin.

**TYPES.**—Holotype: collected at light, El Salvador, San Salvador, May 1, 1957, by P. A. Berry, USNM 69609. Allotype: Mexico, Sinaloa, 27 miles east of Villa Union, July 7, 1964, H. F. Howden (Canadian National Collection). Paratypes, 6 females: 3, El Salvador, San Salvador, May 1, 1957, P. A. Berry, at light; 1, Mexico, Veracruz, Cuitlahuac, Aug. 10–12, 1964, Paul J. Spangler; 1, Mexico, Veracruz, 18 miles north of San Andres, June 1954, D. G. Kissinger; 1, Guatemala, Suchitepequez, Cuyotenango, Olimpo, Finca San Rafael, Jan. 21, 1956, J. M. Campbell, ex large detritus cavity of *Atta cephalotes* (L.), 6–8 feet deep (Canadian National Collection).

**REMARKS.**—This species usually shows no argillaceous coating on the elytral costae; however, the allotype does show a very fine line of this coating along each side of the costae—one of the reasons the specimen was chosen as allotype. It was also the best of the female specimens available.

The species is named in honor of Dr. Federico Islas S. of Mexico City, who described the genus and first species of this interesting and unusual group of myrmecophilous scarabs.

*Cartwrightia cartwrighti*, new species

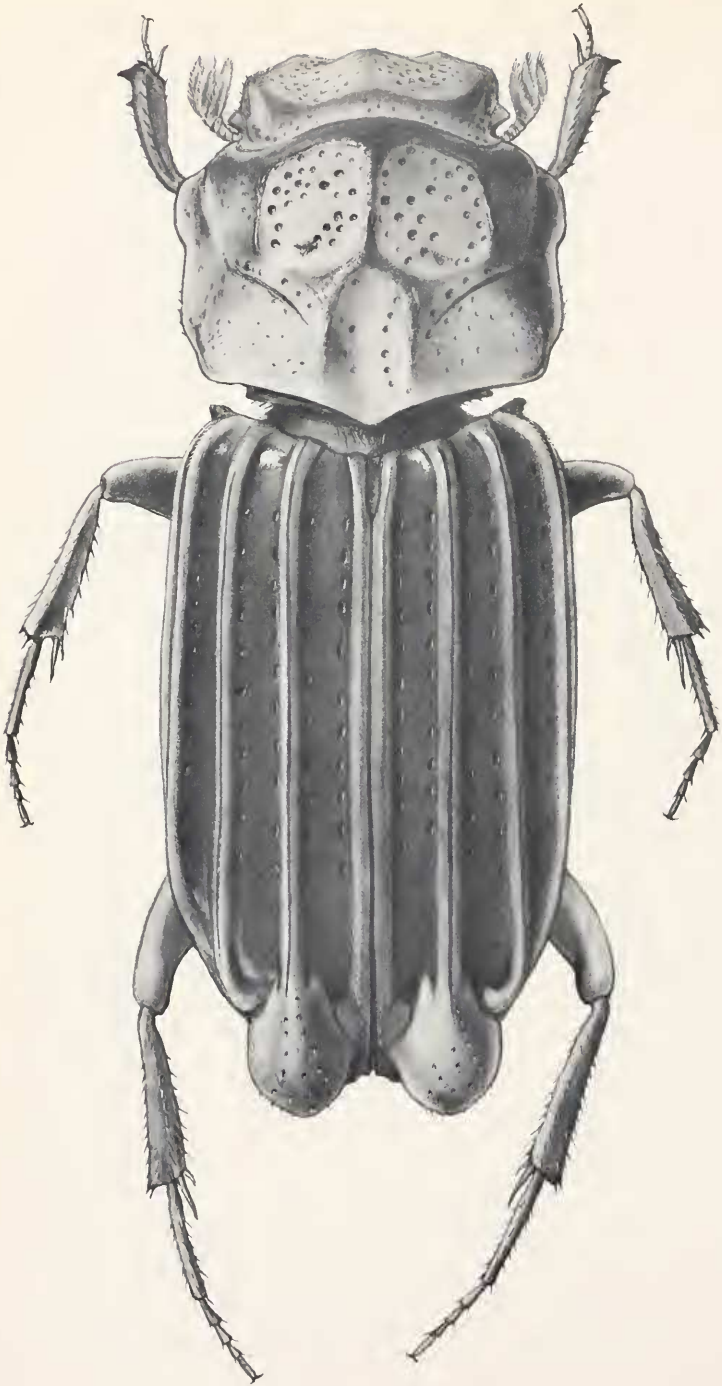
PLATE 2

**HOLOTYPE MALE.**—Length 3.0 mm, width 1.25 mm. Elongate, subparallel; except for smooth black elytral intervals, completely covered, including legs and underside, with grayish-brown argillaceous coating. Clypeus with double anterior edge, upper and lower margins separated by fine narrow furrow extending from gena to gena, lower margin with median triangular tooth directed downward; upper margin anteriorly narrowly shining brown, very narrowly recurved, shallowly emarginate between two low, widely spaced angles, straight laterally to genal angles; genae at middle notched or angulate inward, leaving sharp angle posteriorly; posterior margin of clypeus sharply elevated above frontal-basal area of head and down laterally to genae; fine furrow ending in pit anteriorly behind gena, furrow just in front of fine carinaform margin following curvature of eye; clypeus with strong median longitudinal swelling over middle third, surface argillaceous with some masked, close moderate punctures on each side of median swelling separated by one diameter or less, elsewhere with fine indistinct punctures.

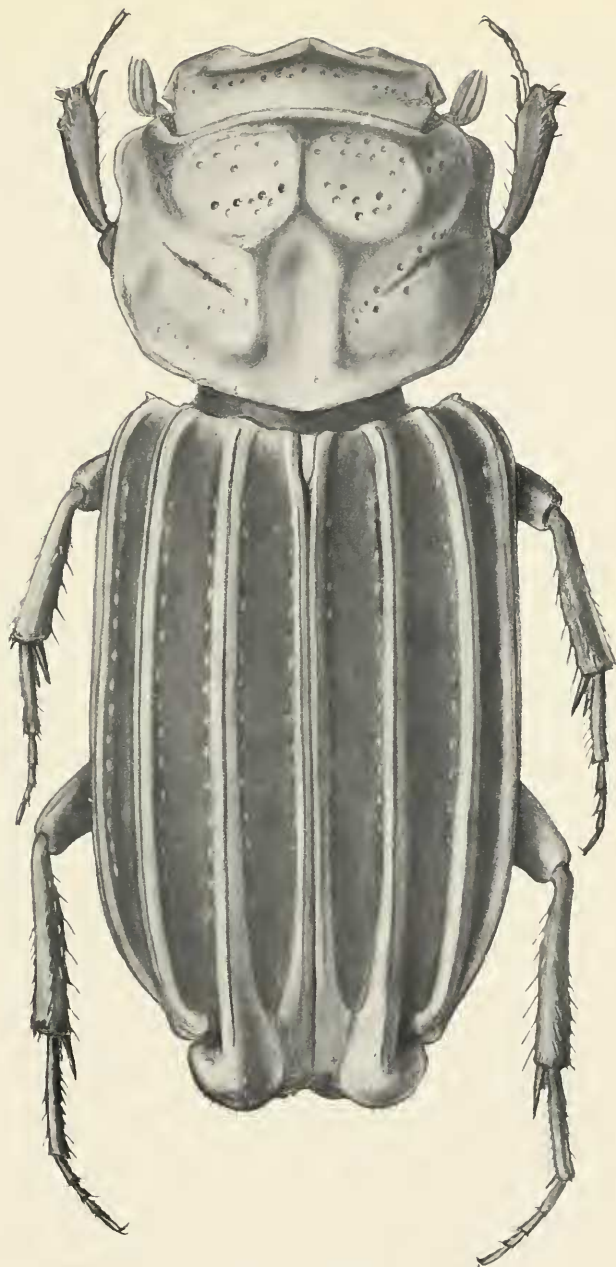


*Cartwrightia islasi*, new species.





*Cartwrightia cartwrighti*, new species.



*Cartwrightia intertribalis* Islas.

